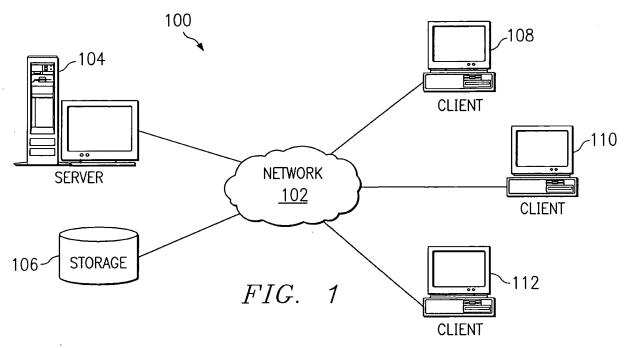AUS920010056US1
Hartel
Method and Apparatus for Delivery of External Data from a
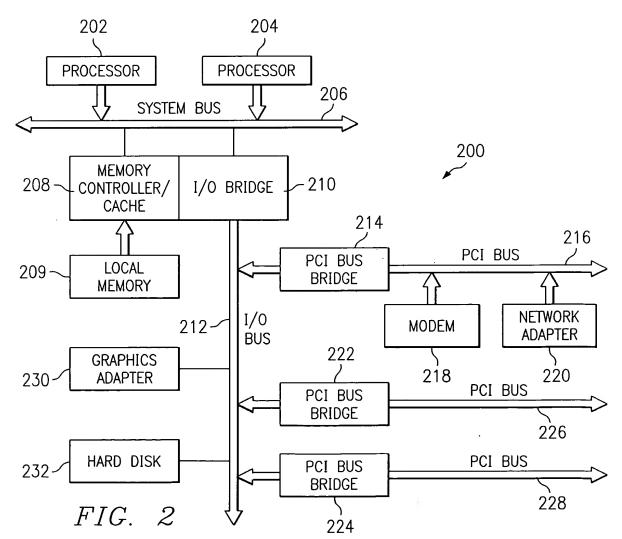Centralized Repository in a Network Data Processing System
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*FIG. 1*



*FIG. 2*

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Method and Apparatus for Delivery of External Data from a
Centralized Repository in a Network Data Processing System
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CLIENT
300

| PROCESSOR | HOST/PCI CACHE/BRIDGE | MAIN MEMORY | AUDIO ADAPTER |

302   308   304   316

BUS

306

| SCSI HOST BUS ADAPTER | LAN ADAPTER | EXPANSION BUS INTERFACE | GRAPHICS ADAPTER | AUDIO/ VIDEO ADAPTER |

312   310   314   318   319

DISK ─ 326
TAPE ─ 328
CD-ROM ─ 330   ─ 332

| KEYBOARD AND MOUSE ADAPTER | MODEM | MEMORY |

320   322   324

*FIG. 3*

406 ─ ActionGroup   0..*
GROUPS

GROUPS
1..*

408
UserRole   AUTHORIZES   ACTION   1..*
1..*

SEQUENCES

404   1   EXECUTES

400 ─ FUDefinition   ActivityFuDefinition ─ 402

1   IMPLEMENTS

*FIG. 4*

410 ─ FUImplDefinition

0..*   DISPLAYS

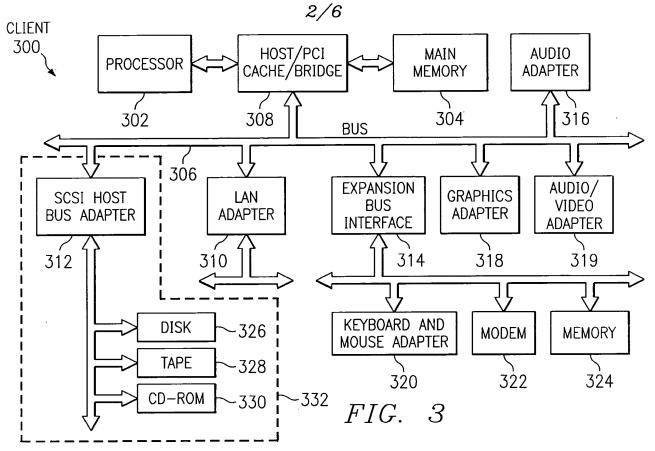412 ─ FUGUIDefinition

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Method and Apparatus for Delivery of External Data from a
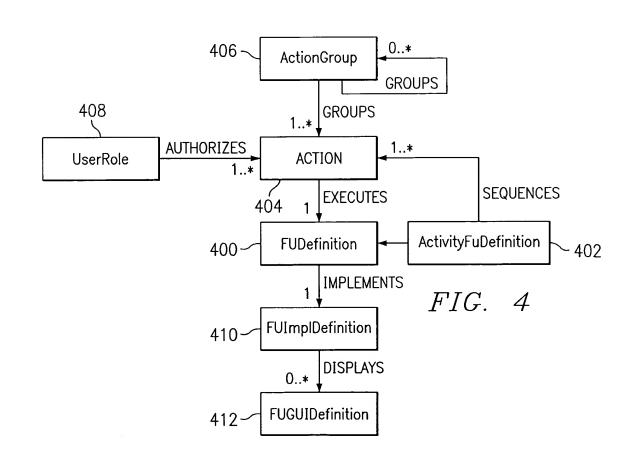Centralized Repository in a Network Data Processing System
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514 — XML     DATA DTD — 516

TEXT     TEXT

502 — DATA IMPORT    — 500

SQL

*FIG. 5*    504 — DATABASE    NOTIFICATIONS

TABLE ROWS

506 — DATA SERVER

OBJECTS

508 — DATA PROXY   510 — DATA PROXY   DATA PROXY — 512

518 — LOCAL PROCESSING ENVIRONMENT   520 — LOCAL PROCESSING ENVIRONMENT   LOCAL PROCESSING ENVIRONMENT — 522

*FIG. 6*

```
<MCPackage name="sample" version="1.0">                606
    <Action name="doit">      608   612
        <FUDefinitionRef>
            <Reference package='sample' version='1.0' mcName='done'/>
        </FUDefinitionRef>                                   604
        <DisplayInfo>               614
            <DisplayName                      616
                key="DisplayNameKey"
                URL="SampleBundle.class"                     610
                defaultText="Display Name"/>
        </DisplayInfo>                    618
    </Action>
</MCPackage>
```
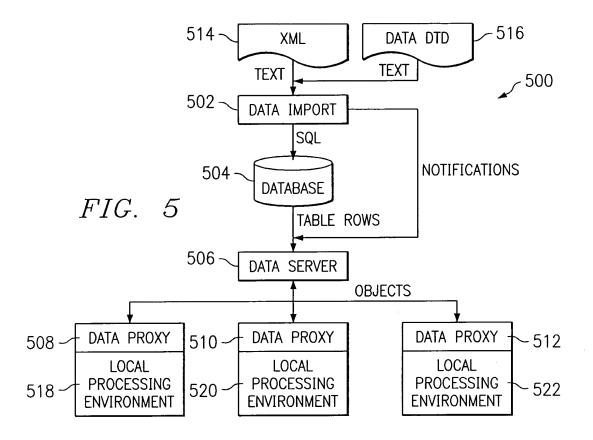
602

600

AUS920010056US1
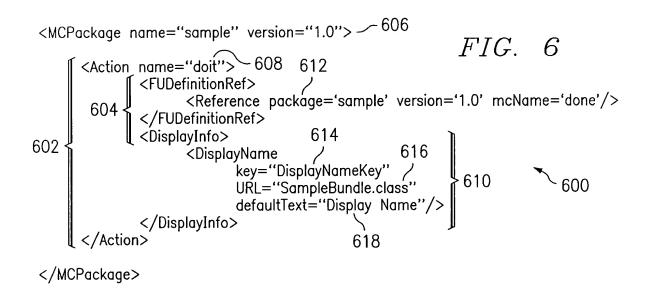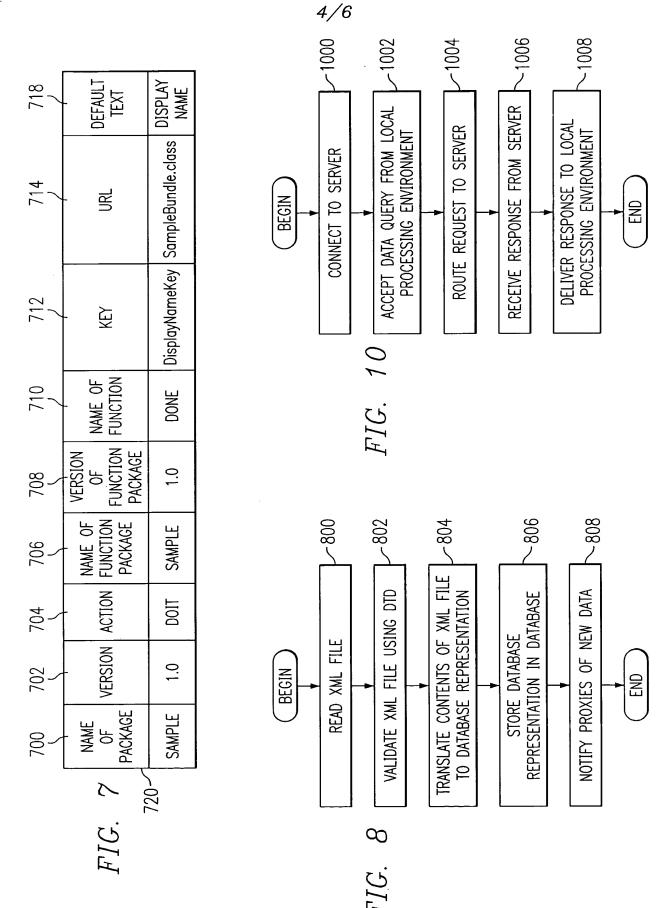Hartel
Method and Apparatus for Delivery of External Data from a
Centralized Repoisitory in a Network Data Processing System
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| NAME OF PACKAGE | VERSION | ACTION | NAME OF FUNCTION PACKAGE | VERSION OF FUNCTION PACKAGE | NAME OF FUNCTION | KEY | URL | DEFAULT TEXT |
|---|---|---|---|---|---|---|---|---|
| 700 | 702 | 704 | 706 | 708 | 710 | 712 | 714 | 718 |
| SAMPLE | 1.0 | DOIT | SAMPLE | 1.0 | DONE | DisplayNameKey | SampleBundle.class | DISPLAY NAME |

720

*FIG. 7*

*FIG. 10*

BEGIN

→ CONNECT TO SERVER — 1000

→ ACCEPT DATA QUERY FROM LOCAL PROCESSING ENVIRONMENT — 1002

→ ROUTE REQUEST TO SERVER — 1004

→ RECEIVE RESPONSE FROM SERVER — 1006

→ DELIVER RESPONSE TO LOCAL PROCESSING ENVIRONMENT — 1008

END

*FIG. 8*

BEGIN

→ READ XML FILE — 800

→ VALIDATE XML FILE USING DTD — 802

→ TRANSLATE CONTENTS OF XML FILE TO DATABASE REPRESENTATION — 804

→ STORE DATABASE REPRESENTATION IN DATABASE — 806

→ NOTIFY PROXIES OF NEW DATA — 808

END

## FIG. 9

BEGIN

900 — RECEIVE QUERY FROM DATA PROXY

902 — QUERY DATABASE

904 — RECEIVE RESULTS FROM DATABASE

906 — ENTRY RETURNED ?

NO → 912 — RETURN ERROR TO DATA PROXY

YES

908 — TRANSLATE ENTRY INTO OBJECT

910 — DELIVER OBJECT TO DATA PROXY

END

## FIG. 11

BEGIN

1100 — OPEN PACKAGE

1102 — EXTRACT DEFINITIONS FILE

1104 — CONVERT DEFINITIONS FILE TO DOM REPRESENTATION

1106 — VERIFY REFERENCES

1108 — CONVERT DOM REPRESENTATION TO TABLE REPRESENTATION AND STORE IN DATABASE

1110 — EXTRACT AND STORE RESOURCE FILES

ERRORS?

YES → 1116 — GENERATE ERROR MESSAGE

NO

1114 — GENERATE NOTIFICATION OF NEW OR UPDATED DEFINITIONS

END

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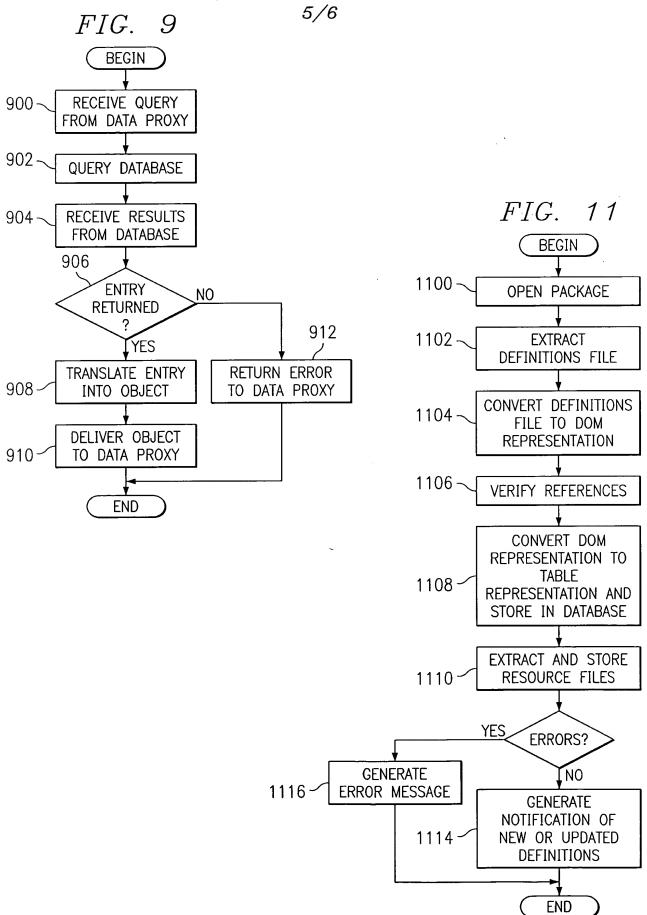Centralized Repository in a Network Data Processing System
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## FIG. 12

BEGIN

1200 — IDENTIFY PACKAGE
FOR REMOVAL

1202 — DELETE DEFINITION
ASSOCIATED WITH PACKAGE

1204 — SEARCH FOR REFERENCES
BACK TO REMOVED PACKAGE

REFERENCES
PRESENT?

1206

YES → 1212

ABORT
TRANSACTION

NO

1208 — COMMIT TO TRANSACTION
AND PERMANENTLY
REMOVE DEFINITIONS

GENERATE
ERROR
MESSAGE

1214

1210 — SEND NOTIFICATION

END

## FIG. 13

BEGIN

1300 — RECEIVE SUBSCRIBE/
UNSUBSCRIBE REQUEST

1302 — SUBSCRIBE OR
UNSUBSCRIBE TO
DATABASE AND UPDATE
OR REMOVE EVENTS

END